

**Seattle-King County
Aging and Disability
Services**

**SYSTEM
SPECIFICATIONS**

**HOME CARE
REFERRAL SYSTEM**

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1.0 SYSTEM SPECIFICATION CHANGES

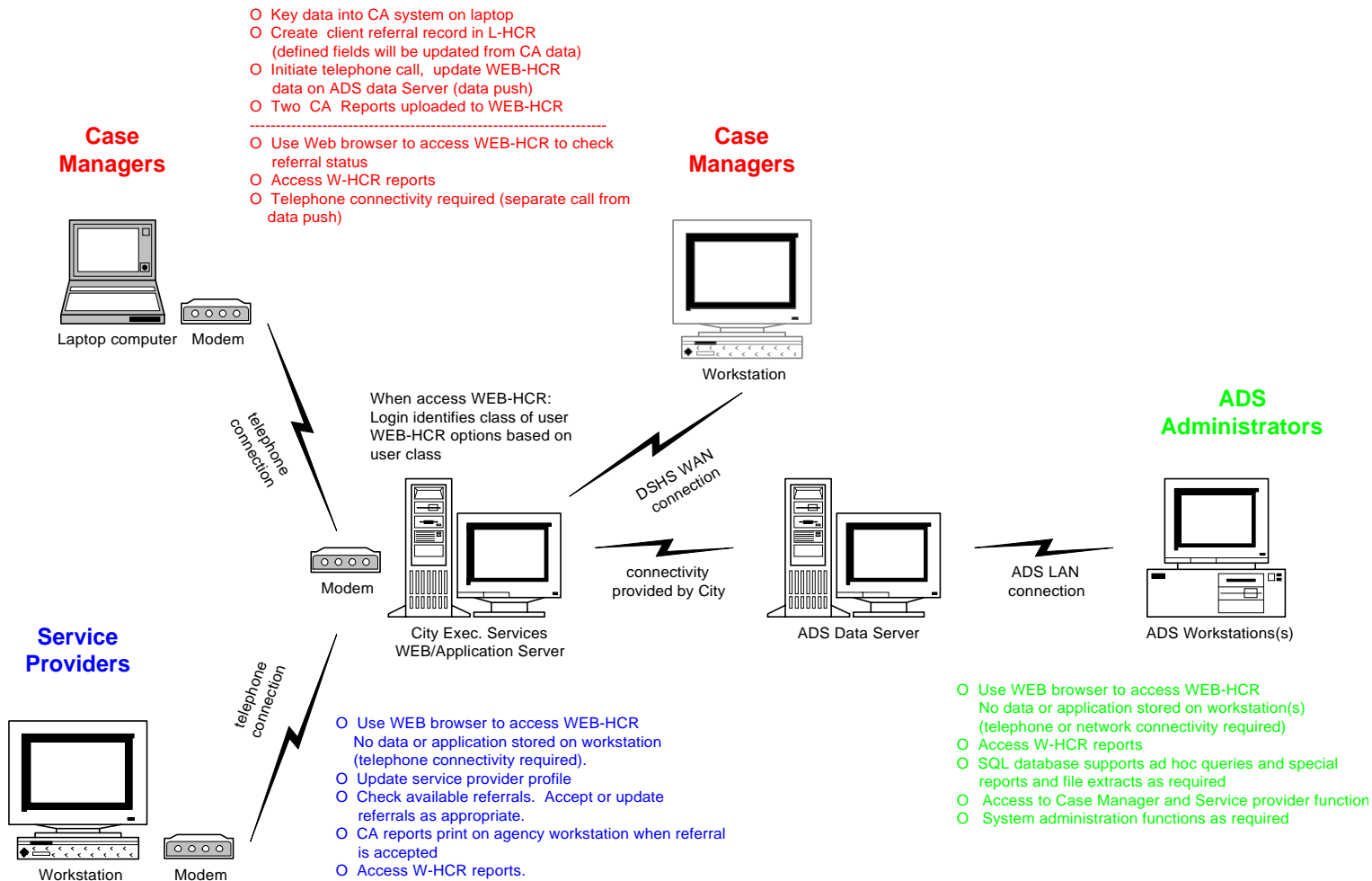
Original Design	Factors	Modified Design
WEB based application	Not feasible to base HCR system on timely down-loads from state CA system to WEB data base.	Need to transfer data keyed into CA system on Case Mangers' PCs to HCR data input screen.
WEB based application	Case managers require ability to create referral records on HCR system without network or modem connection.	Need to develop HCR application to reside on case managers' PCs. This application must include a facility to update a separate WEB based HCR application.
Web based application	Service providers, ADS administrators and case managers need access to centralized client referral data.	Need to develop WEB based HCR system for three classes of users. All users will access this system using a WEB browser.
Application and data reside on single WEB server	Incorrect assumption	Application will reside on WEB server in City Executive Services. Data will reside on Data Sever in ADS workspace. City executive services is responsible for WEB server and connectivity between servers.
VB 6 can be used as a development tool for WEB application.	City executive services requires that all software residing on their Server be written in 100% ASP.	All development tools will be consistent with City standards. LCI will verify appropriate development tools with City executive services before submitting final bid.

2.0 SYSTEM OVERVIEW

Three separate systems sharing data.

CA Database (CA)	Local HCR System (L-HCR)	WEB HCR System (WEB-HCR)
Application and database currently implemented.	New application and database.	New application and database.
Resides on Case Managers' PCs (Visual Basic application, Access database).	Resides on Case Managers' PCs.	Application resides on City executive services WEB server. Data resides on ADS data server. SQL database.
Identified data fields stored in CA available when creating L-HCR record.	Case managers can create and update client referral records.	Client referral data transferred from L-HCR.
Case Managers update State CA system.	Identified data fields previously stored in CA transferred to client referral record input screen(s).	Service provider profile and referral Decline/accept/update input via WEB browser.
No reliance on State file updates (to ADS) to support L-HCR or WEB-HCR.	Additional data keyed and all saved to L-HCR data base.	At login identifies user as Case Manager, Service Provider or ADS administrator. User options vary based on class of user.
	Initiates phone call and updates WEB-HCR (PPP connection/FTP transfer protocol).	Summary and detail reports are available.
	Summary reports will be available from L-HCR data.	SQL database supports ad hoc queries and special reports and file extracts as required.

3.0 SYSTEM CONFIGURATION



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4.0 FUNCTIONAL OVERVIEW

4.1 Case Managers

Case managers will use all systems. The division of home care referral processing between two systems (L-HCR and WEB-HCR) is largely based on Case Managers' need to

- 1.) have data previously entered into the CA database transferred to the home care referral system input form; and
- 2.) have the ability to create client referral records without Internet or network connectivity.

4.1.1 CA Database

- 1.) No modifications will be made to the CA database. Case managers will continue to use the CA database in the same way it is currently being used.
- 2.) Two CA reports (Client Assessment report and Service Plan) need to be uploaded from case managers PC to central storage area on W-HCR. When agency accepts referral CA reports stored on W-HCR will print on agency system.

4.1.2 L-HCR

- 1.) Case managers will create and modify client referral records on L-HCR.
- 2.) Case managers will upload information to WEB-HCR.
- 3.) Summary reports will be available from L-HCR.

4.1.3 WEB-HCR

- 1.) Case managers will use WEB browser to access WEB-HCR.
- 2.) At login user will be identified as Case Manager, Service Provider or ADS Administrator. User options will be based on class of user.
- 3.) Case managers will be able to review status of referrals – accepted vs. not accepted, if accepted by which service provider, scheduled date of service, if updated when was service provided.

- 4.) Case managers will be able to designate referrals that have not been accepted to three additional service providers.
- 5.) Case managers will be able to print reports.

4.2 Service Providers – WEB-HCR

- 1.) Service providers will use WEB browser to access WEB-HCR.
- 2.) At login user will be identified as Case Manger, Service Provider or ADS Administrator. User options will be based on class of user.
- 3.) Service providers will be able to update their profiles.
- 4.) Service providers will be able to view and accept or reject outstanding referrals.
- 5.) Service providers will be able to update referrals (they have previously accepted) to indicate the service has been provided.
- 6.) Service managers will be able to print reports.

4.3 ADS Administrators – WEB-HCR

- 1.) ADS staff will use WEB browser to access WEB-HCR.
- 2.) At login user will be identified as Case Manger, Service Provider or ADS Administrator. User options will be based on class of user.
- 3.) ADS Administrators will have access to all Case Manager and Service Provider functions.
- 4.) ADS Administrators will be able to print all reports.
- 5.) ADS Administrators will be able to access SQL data for ad hoc reports and file extracts.
- 6.) ADS Administrators will provide other system maintenance functions defined during analysis.
- 7.) ADS can define system criteria which will result in system generated Email to case manager and/or agency (i.e. referral which has not been after two days resulted in an Email message to the case manager).

5.0 USER PROCESS FLOW CHARTS

5.1 CA System

No modifications will be made to CA system functionality.

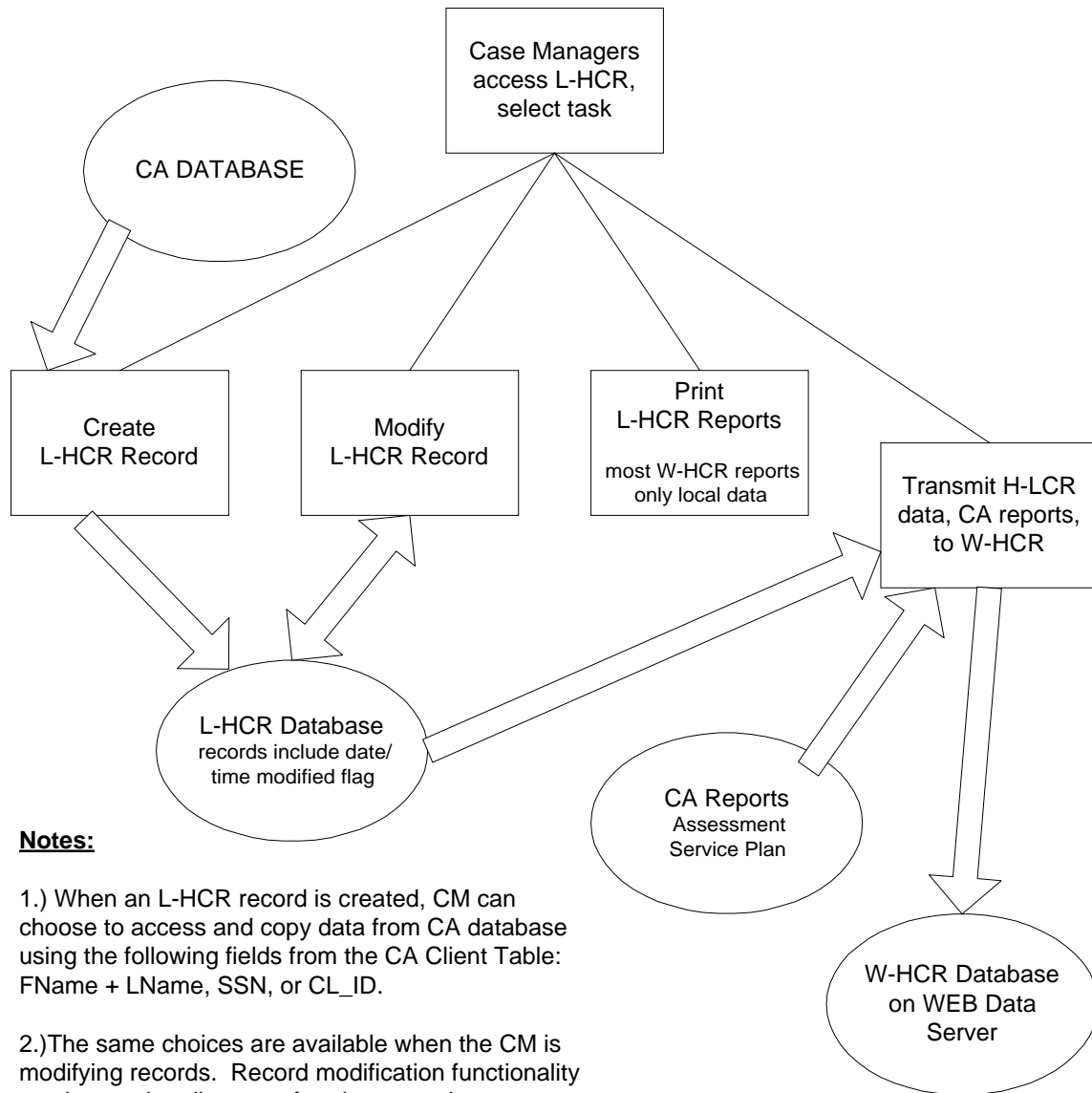
A facility will be developed to have two standard CA reports (Client Assessment and Service Plan) made available to agencies accepting referrals via W-HCR. This facility will be developed in cooperation with DSHS staff responsible for maintaining the CA system.

DSHS will develop a means to have two standard CA reports (Client Assessment report and Service Plan) stored as files with discrete names on the case managers' notebook/desktop systems. These files would then be uploaded to the W-HCR data server along with L-HCR data. When an agency accesses W-HCR via modem and *accepts* a referral these reports would print on the agency's printer.

This functionality will be reflected as a separate line item on the accompanying bid.

5.2 L-HCR

L-HCR Functional Overview



Notes:

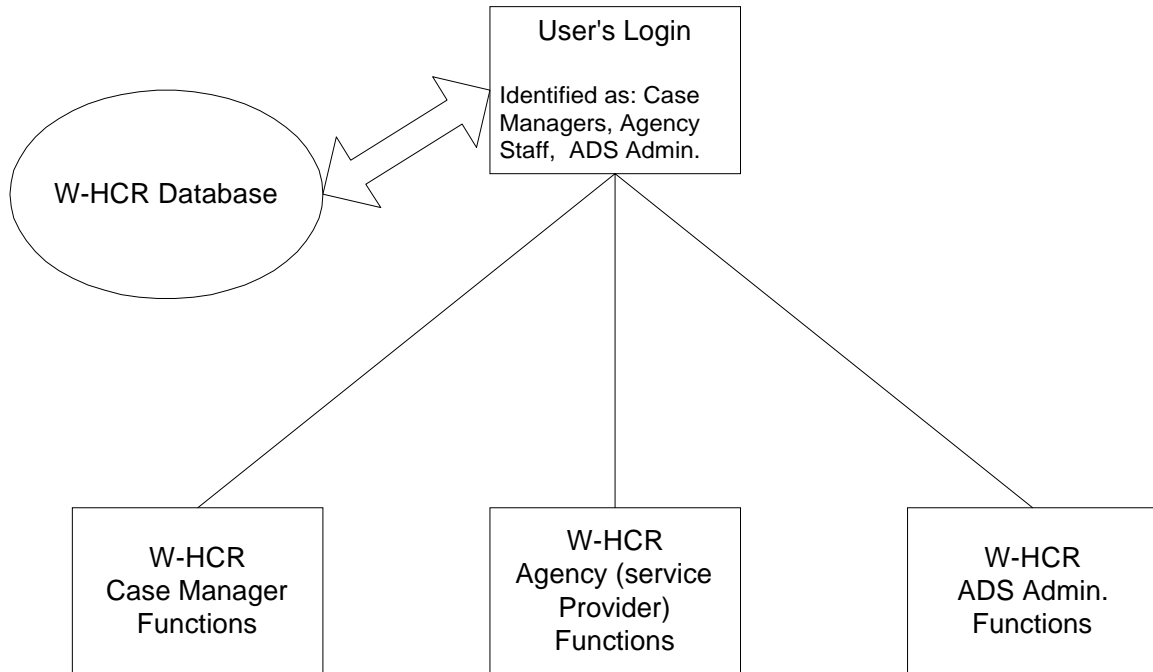
1.) When an L-HCR record is created, CM can choose to access and copy data from CA database using the following fields from the CA Client Table: FName + LName, SSN, or CL_ID.

2.) The same choices are available when the CM is modifying records. Record modification functionality can be used to direct a referral to up to three additional agencies.

3.) When transferring L-HCR records and CA reports to the W-HCR data server comparisons between the last transfer date and date/time modified flags will determine data to be transferred.

5.3 W-HCR

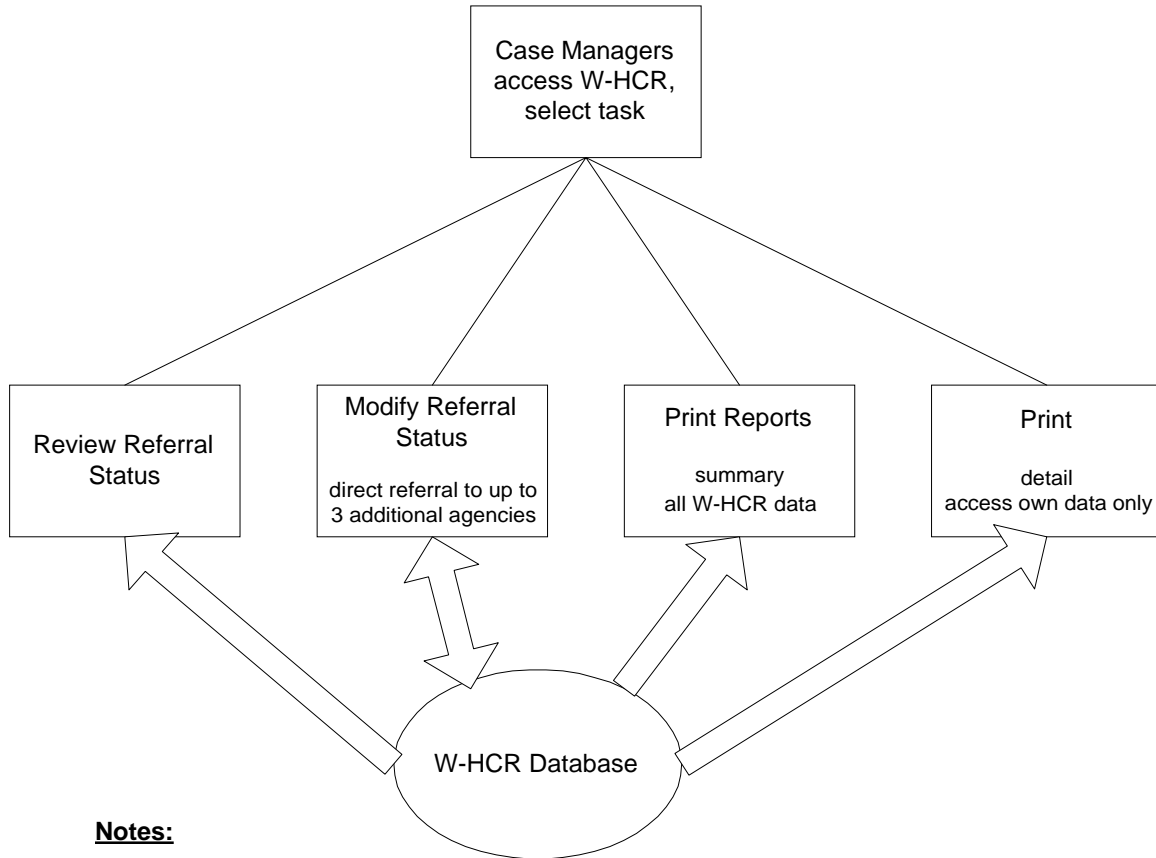
W-HCR Functional Overview User Login



Notes:

- 1.) User information stored in W-HCR database, Users table, identifies users as Case Managers, Agency Service Providers, or ADS Administrators
- 2.) Case Managers will need to initiate a separate server connections (phone/modem or WAN) for L-HCR data uploads and W-HCR access.

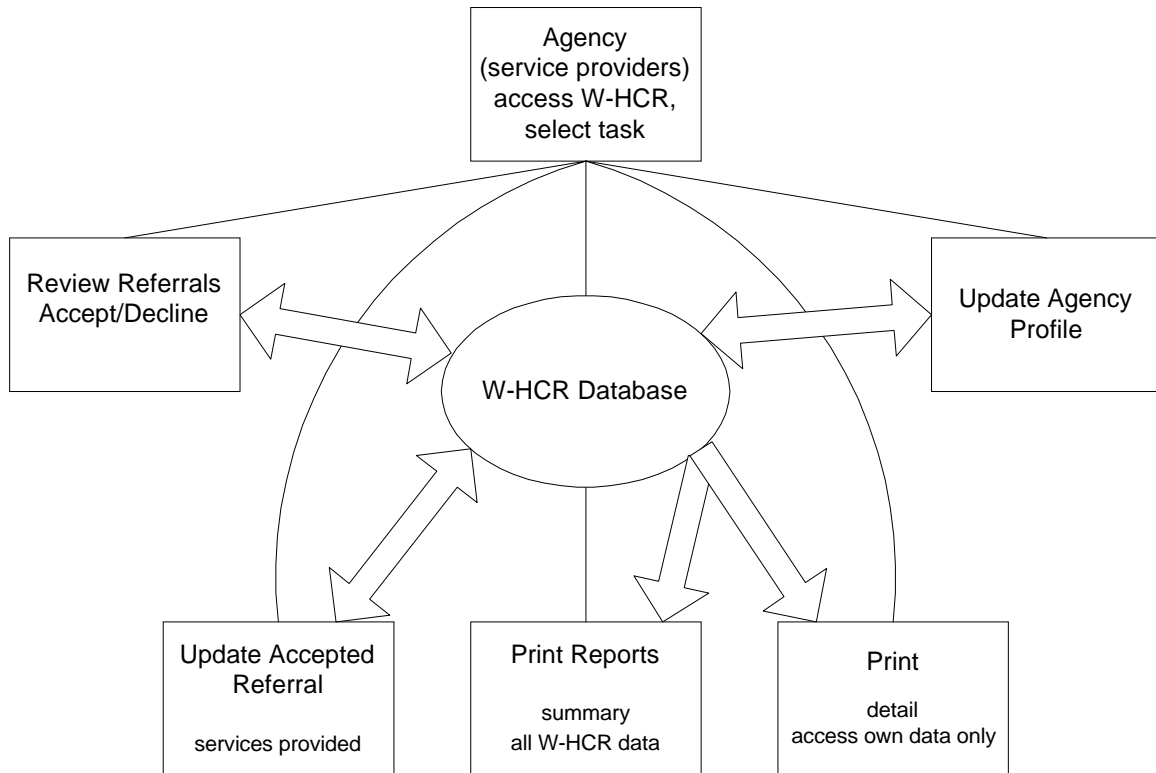
W-HCR Functional Overview Case Manager Functions



Notes:

- 1.) When modifying referral status case manager can direct referral to up to three additional agencies. This will create up to three new records in the referral table. No other modifications can be made.
- 2.) Up to three additional referrals can also be creating by modifying the L-HCR record and repeating the upload to W-HCR. See Diagram - L-HCR Functional Overview.
- 3.) If the case manager needs to modify client data the modifications will need to be made on L-HCR and uploaded.
- 4.) When modifying referral status on W-HCR (directing referrals to additional agencies), changes made to W-HCR data will not be made to L-HCR data.
- 5.) Detailed reports must be limited to provide client confidentiality/data security. Only records where CaseMgr in Client table corresponds to CMID in User table will be available.

W-HCR Functional Overview Agency Functions

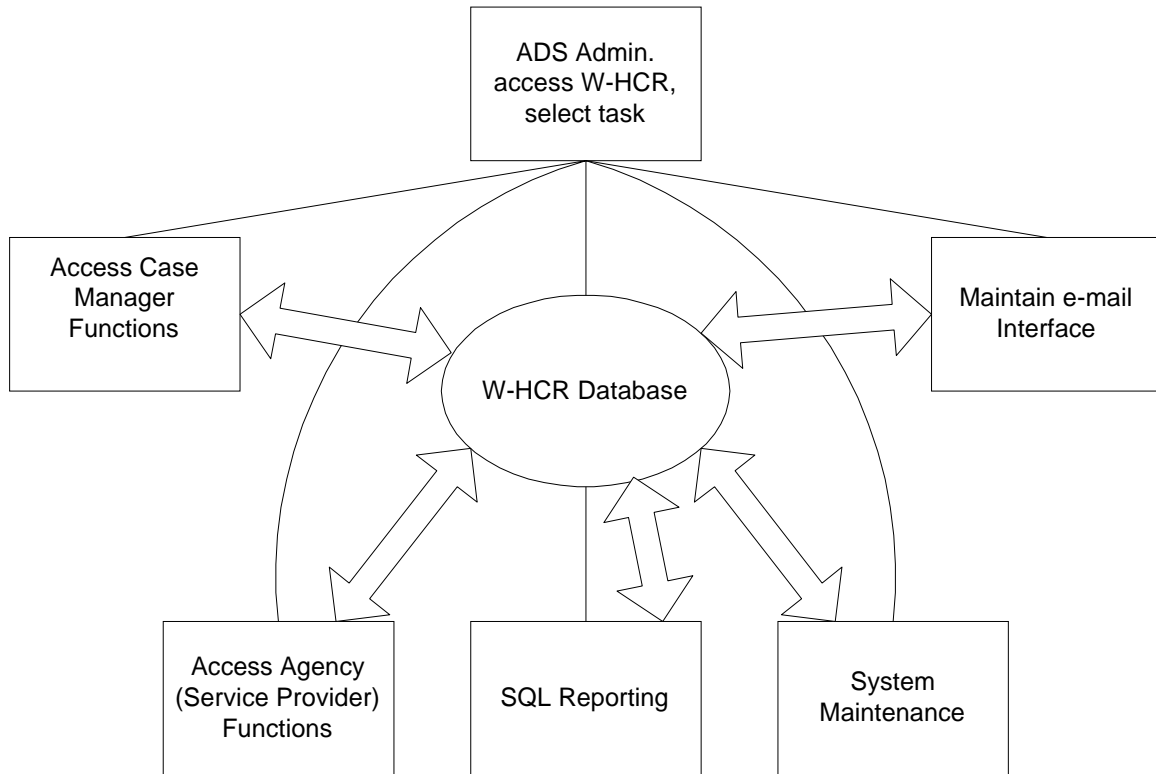


Notes:

- 1.) When agency accepts referral, referral(s) to other agencies must be updated to indicate referral is no longer available.
- 2.) When an agency accepts a referral the CA reports uploaded with L-HCR data and currently in storage on W-HCR will be available to print on the agency's printer.
- 3.) Detailed reports and file maintenance must be limited to provide client confidentiality/data security. Only records where AgencyID in User table corresponds to values in Referral and Agency tables will be available for maintenance and reporting.

W-HCR Functional Overview

ADS Admin. Functions



Notes:

- 1.) ADS administrators will have access to all Case Manager and Agency functions.
- 2.) ADS administrators would define criteria for the generation of standard e-mail messages. A process would be run on a regular basis to generate the appropriate e-mail
- 3.) System maintenance functions include, but are not limited to, user maintenance, HCR Code/Option (Lexicon) table maintenance, using SQL capabilities to assist users as necessary.

6.0 DATA TRANSFER

- 1.) L-HCR will copy defined fields from CA into the L-HCR client referral input screen.
- 2.) All data copied or input into the L-HCR client referral input screen will be saved in L-HCR data tables. There will be no additional linkages between CA and L-HCR data.
- 3.) L-HCR will maintain an extract file of all new or modified client referral records which have not been uploaded to WEB-HCR.
- 4.) The Case Manager will be responsible for originating the WEB-HCR upload process. L-HCR will initiate the a city to the City's application server. A PPP connection will be established.
- 5.) After the connection is established, FTP will be used to transfer the extract file from L-HCR to a pre-defined network drive physically located on a system at ADS (the data server). City executive services will provide connectivity between the application and data server. LCI will co-ordinate with them as necessary during development and testing.
- 6.) WEB-HCR will include an automated process which runs at a frequency ADS determines (perhaps every 15 minutes) to search for extract files and, if found, load the extract file into the WEB-HCR data base.

7.0 DATA BASE STRUCTURE

7.1 CLIENT TABLES

Client Main – one record per client referral

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
RecordID (KEY)				HCR system assigns
ClientID	Y	Client	CL_ID	May not be omitted, require CM keyed input (dummy value) if not in CA record
SSN	Y	Client	SSN	
Fname	Y	Client	CL_Fname	
Lname	Y	Client	CL_Lname	
Addr1	Y	Client	CL_Street1	
Addr2	Y	Client	CL_Street2	
City	Y	Client	CL_City	
State	Y	Client	CL_State	
ZipCode	Y	Client	CL_Zip	
Phone	Y	Client	CL_Phone	
DOB	Y	Client	CL_DOB	
Weight	Y	Assessment	Weight	
Marital status	Y	Client	CL_marital	
Gender	Y	Client	CL_Sex	
Race/ethnicity	Y	Client	CL_Race	
Diag1	Y	Assessment	Diagnosis1	Code - diagnosis table
Diag2	Y	Assessment	Diagnosis2	Code - diagnosis table
Diag3	Y	Assessment	Diagnosis3	Code - diagnosis table
AidTransReqd	N			Transportation, CM input-keyed
AidGenderPref	N			CM input-keyed
AidLangPreg	N			CM selection - from language table
Cpets	N			CM input-Y/N
Csmoker	N			CM input-Y/N
CnutReqd	N			CM selection-from client nutrition table

CschedReqd	N			CM selection-from client schedule table
CnutPref	N			CM selection-from client nutrition table
CschedPref				CM selection-from client schedule table
Clanguage	N			CM selection-from language table
CaseMgr	Y	Assessment	Staff_ID	
Comment	N			CM input-keyed

CLIENT FUNCTIONAL – 1 record per *each* client/could be included in main
Describes assistance required

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
BreakfastPrep	Y	Functional	Prep_Bfast_Score	Code - score table
BreakfastEat	Y	Functional	Bfast_Score	Code - score table
LightmealPrep	Y	Functional	Prep_Lmeal_Score	Code - score table
LightmealEat	Y	Functional	Lmeal_Score	Code - score table
MainmealPrep	Y	Functional	Prep_Mmeal_Score	Code - score table
Mainmeal_Eat	Y	Functional	Mmeal_Score	Code - score table
Toileting	Y	Functional	Toilet_Score	Code - score table
Ambulation	Y	Functional	Amb_Score	Code - score table
Transfer	Y	Functional	Transfer_Score	Code - score table
Positioning	Y	Functional	Pos_Score	Code - score table
SpecBodyCare	Y	Functional	Body_Care_Score	Code - score table
PersHygiene	Y	Functional	Hygience_Score	Code - score table
Dressing	Y	Functional	Dress_Score	Code - score table
Bathing	Y	Functional	Bath_Score	Code - score table
SelfMedication	Y	Functional	Self_Med_Score	Code - score table
TravelMedAppt	Y	Functional	Travel_Score	Code - score table
ShopW/Client	Y	Functional	Shop_w/_Score	Code - score table
ShopForClient	Y	Functional	Shop_for_Score	Code - score table
LaundryInHome	Y	Functional	Laundry_in_Score	Code - score table
LaundryOutHome	Y	Functional	Laundry_out_Score	Code - score table
Housework	Y	Functional	House_Score	Code - score table
WoodSupply	Y	Functional	Wood_Score	Code - score table
AddSupHours	Y	Functional	Add_Sup_Hours	
CogSupHours	Y	Functional	Cog_Hours	

CLIENT PSYCH – 1 record per *some* clients/ could be included in main
Described mental illnesses/conditions if present in client

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
Disorientation	Y	Psych	Disorient	Code–psych table
MemoryImpaired	Y	Psych	Mem	Code–psych table
JudgementImpaired	Y	Psych	Judge	Code–psych table
Hallucinations	Y	Psych	Halluc	Code–psych table
Delusions	Y	Psych	Delusions	Code–psych table
Receptive/ ExpressiveAphasia	Y	Psych	Aphasia	Code–psych table
Anxiety	Y	Psych	Anxiety	Code–psych table
Depression	Y	Psych	Depress	Code–psych table
Withdrawn	Y	Psych	Wthdrawn	Code–psych table
Wandering	Y	Psych	Wander	Code–psych table
VerballyAbusive	Y	Psych	Verbal	Code–psych table
DisruptiveBehavior	Y	Psych	Disrupt	Code–psych table
AssaultiveBehavior	Y	Psych	Assult	Code–psych table
DangerToSelf	Y	Psych	Danger	Code–psych table
OtherBehavioral Impairment	Y	Psych	PSC_Other	Code–psych table
ClientAbleTo SuperviseProvider	Y	Psych	Sup_Care_Pro	Code–psych table

CLIENT COMMENTS – multiple comment data per each client record,
HCR system will require rules to identify and display
various types of comments*

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
ClientID	Y	Client	CL_ID	May not be omitted, require CM keyed input (dummy value) if not in CA record
CommentField	Y	Comment	Field_Name	
Comment	Y	Comment	Text	Four types of comments will be transferred from CA system *,
CommentType	N			HCR system generated (?)**

- * Five types of comments will be identified by the HCR database. Our application will need to incorporate rules to identify the various types of comments and display them appropriately in screens and reports.

4 types of comments relating to the Functional Table

A comment *can* be associated with each field in the CA database Functional table.

- Our application will need to search the CA Comments table for records associated with the client record (ClientID) being created and field names found in the CA Client Functional table.
- This search may result in more than one record per ClientID and FieldName. If multiple records are found, the text associated with the records should be treated as one large comment. (Records' text should be appended in the order the records are encountered in the CA Comments table.)
- There can be up to four types of comments included within the Text field(s) of Functional comment records: *Functional Assessment text* is not delimited; *Assistance Required text* is [] delimited (appears between [and]; *Assistance Available text* is { } delimited; and *Unmet Needs text* is () delimited. The various types of text are typically stored in the order described above. When the comment is displayed and/or printed in the HCR system it will need to be associated with the appropriate Client Functional data and comment type.

1 type of Psych/Social comment

A comment can be associated with each field in the CA database ClientPsych table.

- Our application will need to search the CA comments table for comments associated with the client record (ClientID) being created and field names found in the CA Psych table.
- This search may result in more than one record per ClientID and FieldName. If multiple records are found, the text associated with the records should be treated as one large comment. (Records' text should be appended in the order the records are encountered in the CA Comments table.)
- There is only one type of Pscy/Social comments. When the comment is displayed and/or printed in the HCR system it will need to be associated with the appropriate Client Psych data.

- ** If we define and store comment types as part of the HCR Comment table it might be easier than repeatedly applying rules to data stored in the format copied from the CA Comment table. Defining and storing comment types could also limit comment identifying logic to L-HCR.

7.2 Client Attribute Tables

7 additional lexicon tables

Client Nutrition, Client Schedule, Language, Score (Functional Ability Score), Psych Code, Diagnosis Code, Client Race

The language table will also be used to define Agency language served.

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
Code (Key, system use)	N			
Description	N			

LCI will work with ADS to evaluate the code and description values currently maintained in the CA system. This process will determine if the CA values will be used in the HCR system. Or if some CA values will be translated to new HCR system values and other values will be rejected by the HCR system and require the case manager to select from values in the HCR attribute tables. This process will be the first step of the system development phase of the project.

7.3 AGENCY TABLES

Agency - Service Provider Info.

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
AgencyID (KEY)	N			Assigned by ADS
AgencyName	N			Agency input-keyed
AgencyContact	N			Agency input-keyed
Region	N			Agency selection-lexicon table, multiple selection
Addr1	N			Agency input-keyed
Addr2	N			Agency input-keyed
City	N			Agency input-keyed
State	N			Agency input-keyed
Zip	N			Agency input-keyed
Phone Number	N			Agency input-keyed
Comments	N			Agency input-keyed
Languages	N			Agency selection-language table, multiple selections
MentHealthSrv	N			Agency selection-mental health table, multiple selections

AgencyEmail	N			Agency input-keyed
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7.4 AGENCY ATTRIBUTE TABLES

2 additional lexicon tables

Region, Mental Health Services

(Language table will contain client and agency table attributes.)

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
Code (Key, system use)	N			System assigns
Description	N			ADS input-keyed

LCI will work with ADS to evaluate the code and description values currently maintained in the CA system. This process will determine if the CA values will be used in the HCR system. Or if some CA values will be translated to new HCR system values and other values will be rejected by the HCR system and require the case manager to select from values in the HCR attribute tables. This process will be the first step of the system development phase of the project.

7.5 CASE MANAGER TABLE

Case Manager – one record per case manager

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
CMID (Key)	N			Assigned by ADS
OrgID	N			CM selection-Organization table
CMFname	N			CM input-keyed
CMLname	N			CM input-keyed
CMMI	N			CM input-keyed
CMPhone	N			CM input-keyed
NotPref	N			CM selection-from Email, voicemail, none
Email	N			CM input

7.6 Case Manager attributes

Organizaton ID's – one additional lexicon table

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
Code (Key, system use)	N			System assigns
Description	N			ADS input-keyed

7.7 REFERRAL TABLE

Field	From CA (Y/N)	CA Table	CA Field	Data Source/ Comments
RecordID	N			System updates
AgencyID	N			System updates
ReqStartDate				CM input-keyed, required input
TempAssignment				CM input-select Y/N
AuthHours	Y	Functional	Total_Hours	from CA, CM can override with keyed input
EmergencyStaffing	N			Default to N, CM can override to Y
PreAccepted	N			Default to N, CM can override to Y
RefDate/Time	N			System generated, when referral uploaded to W-HCR
AgencyAccept/ Decline	N			Agency selection- Accept or Decline
DeclineReason	N			Agency input-check boxes. Can select more than 1.
SchedStartDate	N			Agency input-keyed
EmployeeLname	N			Agency input-keyed
EmployeeFnam	N			Agency input-keyed
SupervisorLname	N			Agency input-keyed
SupervisorFname	N			Agency input-keyed
SupervisorPhone	N			Agency input-keyed
Accept/Decline Date/Time	N			System generated, when referral accepted/declined
UpdatedStartDate	N			Agency input-keyed
UpdateDate/Time	N			System updates

UpdateComments	N			Agency input-keyed
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7.8 REFERRAL ATTRIBUTES TABLES

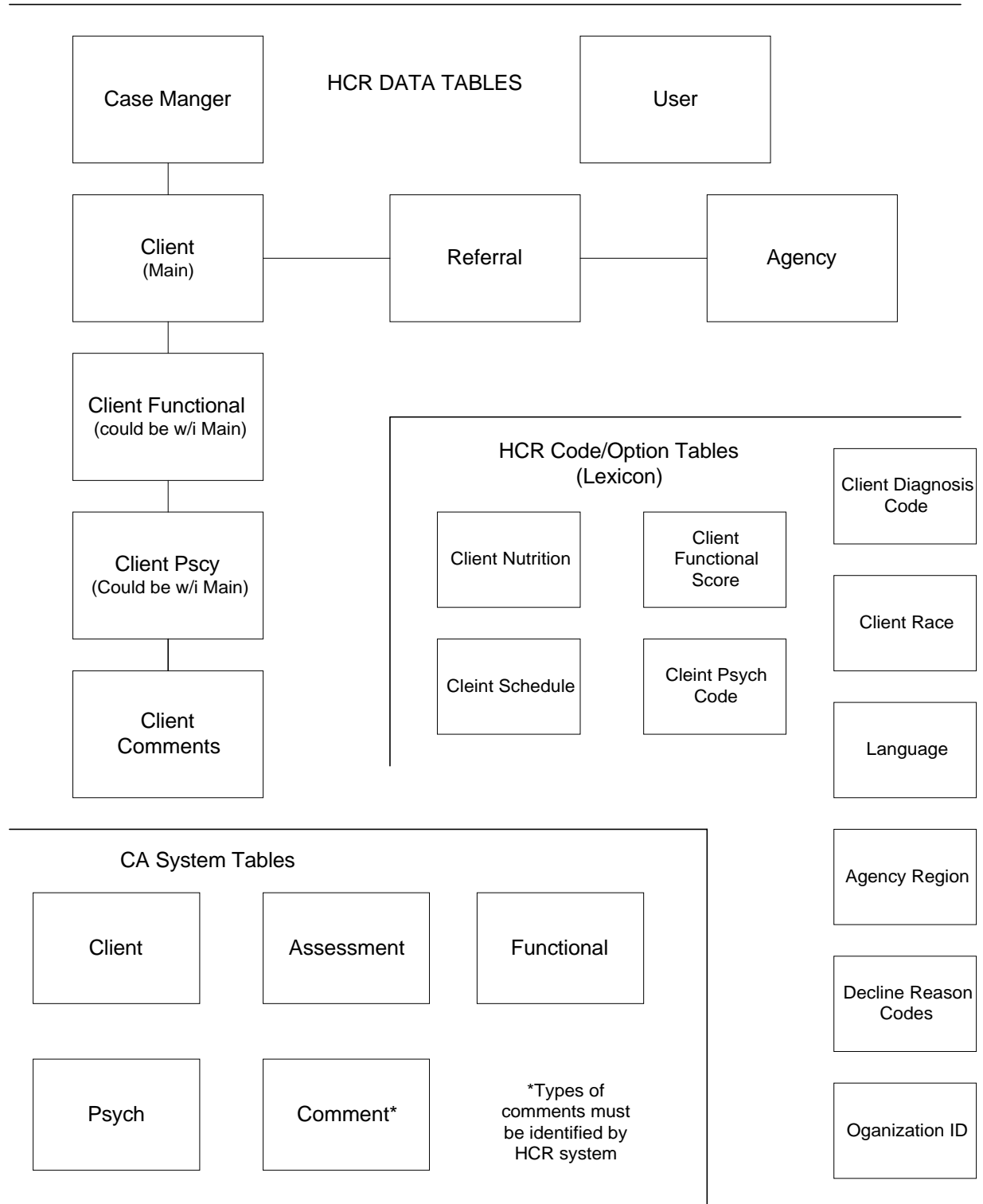
Decline Reason Code Table – 1 additional lexicon table

Field	From CA (Y/N)	CA Table	CA Field	Data Source/Comments
Code (Key, system use)	N			System assigns
Description	N			ADS input-keyed

7.0 USERS TABLE

Field	From CA (Y/N)	CA Table	CA Field	Data Source /Comments
UserID	N			Assigned by ADS
Password	N			User input – keyed/verified, need to implement rules regarding password maintenance
UserClass	N			Assigned by ADS
CMID				Input by ADS. Filter for record maintenance/detail reports.
AgencyID	N			Input by ADS. Filter for record maintenance/detail reports.

DATA TABLES



8.0 REPORTS

8.1 Summary Reports

Summary reports need to be available on L-HCR and W-HCR.

When Agency or Case Manager users request reports they will need to be filtered so only information pertaining to their clients is available.

Report fields – there will be one summary report format

Columns – LName, FName, ClientID, ZipCode, CaseMgr, Agency, UpdatedStartDate, AuthHours

Printed in landscape

Print totals - last line of report should be count of records

Print sub totals – following each set of records within sort/query criteria

Query conditions – Organization ID, Agency, ZipCode, CLanguage, AidLangPref, CSchedReqd, CSchedPref, Accepted records (Referred vs. Staffed), Declined records, DeclineReason, AuthHours

Also query/sort by “Turn Around Time.” “Turn Around Time” is based on two date fields in the Referral table. It should be reflected in days.

Turn Around Time = UpdatedStartDate-ReqStartDate

Request report for one, many or all Query values

Queries based on ZipCode and AuthHours could request ranges, <, or > (these are numeric fields).

Combine up to three Query Conditions in single report

Sorted (and sub total) by – same fields defined as query conditions.

8.2 Detail Reports – four reports

Agency Referral Report – available on W-HCR only. Available only to Agencies. Agency can only access reports summarizing their referrals. Information about agency referrals, accepted vs. unaccepted, CLanguage, AidLangPref, AuthHours, “Turn Around Time, etc.

Agency Profile Report – available on W-HCR only. Available to all case managers and agencies. Report summarizes all agencies, part marketing (information from Agency table) part performance report (3-5 performance indicators using information from referral table – accepted vs. referred, turn around time, average AuthHours, etc.)

Agency Performance Report – available on W-HCR. Available only to case managers. All data available to all case managers. Summary information about agency referrals – accepted vs. declined, analysis of CLanguage and AidLangPref staff, AuthHours accepted vs. declined, DeclineReason, ReqStartDate vs. SchedStartDate vs. UpdatedStartDate

Client Fact Sheet – available on W-HCR only. Available to case managers only. Case managers can only access reports summarizing their referrals. Descriptions of referrals, agency who accepted, DeclineReasons from other agencies, Update comments, etc.

8.3 Ad Hoc SQL Queries

Developed and maintained by ADS.

8.4 Uploading CA Reports, providing them to agency accepting referral

The following functionality will be bid as a separate line item.

ADS would like to W-HCR to provide agencies with two reports created by the CA system. Under current operating procedures, the case manager is responsible for printing and faxing these reports for the Agency after the referral is accepted.

The CA system would need to background print two standard reports (Assessment Report and Service Plan Report) each time a CA record was saved. These reports would need to be stored in appropriately named files on the case managers PC. (We would work with the state to coordinate this, but the modifications to the CA systems VB4 front-end would be done by the state to our specifications.)

Our applications would then be responsible for the following. The appropriate print files would be uploaded to the W-HCR data server when the L-HCR records are transferred. The print files would remain in a storage area (file) on the data server until an Agency accepts a referral. The agency, which is accessing W-HCR via modem, would then be able to print the reports on their local printer. After the agency verified that the reports have printed the report would be deleted from W-HCR.

8.5 Email Notification, status updates for case managers and agencies a

The following functionality will be bid as a separate line item.

ADS would like W-HCR to some criteria searches (probably 3 – 5) and generate automatic Email messaged each night. An example of a criteria and the corresponding Email would be to search for all referral records with Accept/DeclineDate/Time greater than two days old and bland UpdatedStartDate time and send a pre-defined Email message to the corresponding case manager and agency.

ADS would prefer the ability to modify the selection criteria, Email recipients (case manager, agency, or both) and the pre-defined Email message text.